



RPX Series

USER'S MANUAL

INDEX

1.1	Introduction	page 1
1.2	Packing	page 1
1.3	Drawing	page 2~16
1.4	Features	page 17
1.5	Specification	page 18~21
1.6	Installation & Testing	page 22~23
1.7	Hot-Swap Procedures	page 24
1.8	DC ON/OFF Switch Installation	page 24
1.9	Pinouts and function of connectors	page 25
1.10	Trouble shooting	page 26

1.1 INTRODUCTION

Thank you for the purchase of the Redundant Switching Power System RPX product (X may stand for A / D / H / I / M / S / U), each model has the same main structure and functions. The difference is on the shape and dimension. For each detail drawing, please refer to the section 1.3.

Your RPX is a redundant switching power supply set, it consists of

- (1) complete metal frame (optional)
- (2) two PS/2 form factor power supplies with HOT-PLUGGABLE capability
- (3) redundant power control board (RPC)
- (4) power supply unit holder,

It delivers full safety redundant (**hot-swappable**) function and provides the **hot-pluggable** feature. In other words, it can offer a more reliable and safer, easy install / maintain operation in Power Supply to your computer system.

Its major function is the two power supplies can mutually backup when one of the power supplies is defective. At the same time, it provides the warning subsystem, such as **LED display, buzzer alarm, power defective signal** etc.

When both the power supplies are at normal condition, it balances the load share and increases the power supply system's reliability.

To really discover the power and ease in using this product, we recommend that you read through this manual carefully.

1.2 PACKING

Your RPX box package should consist of the followings:

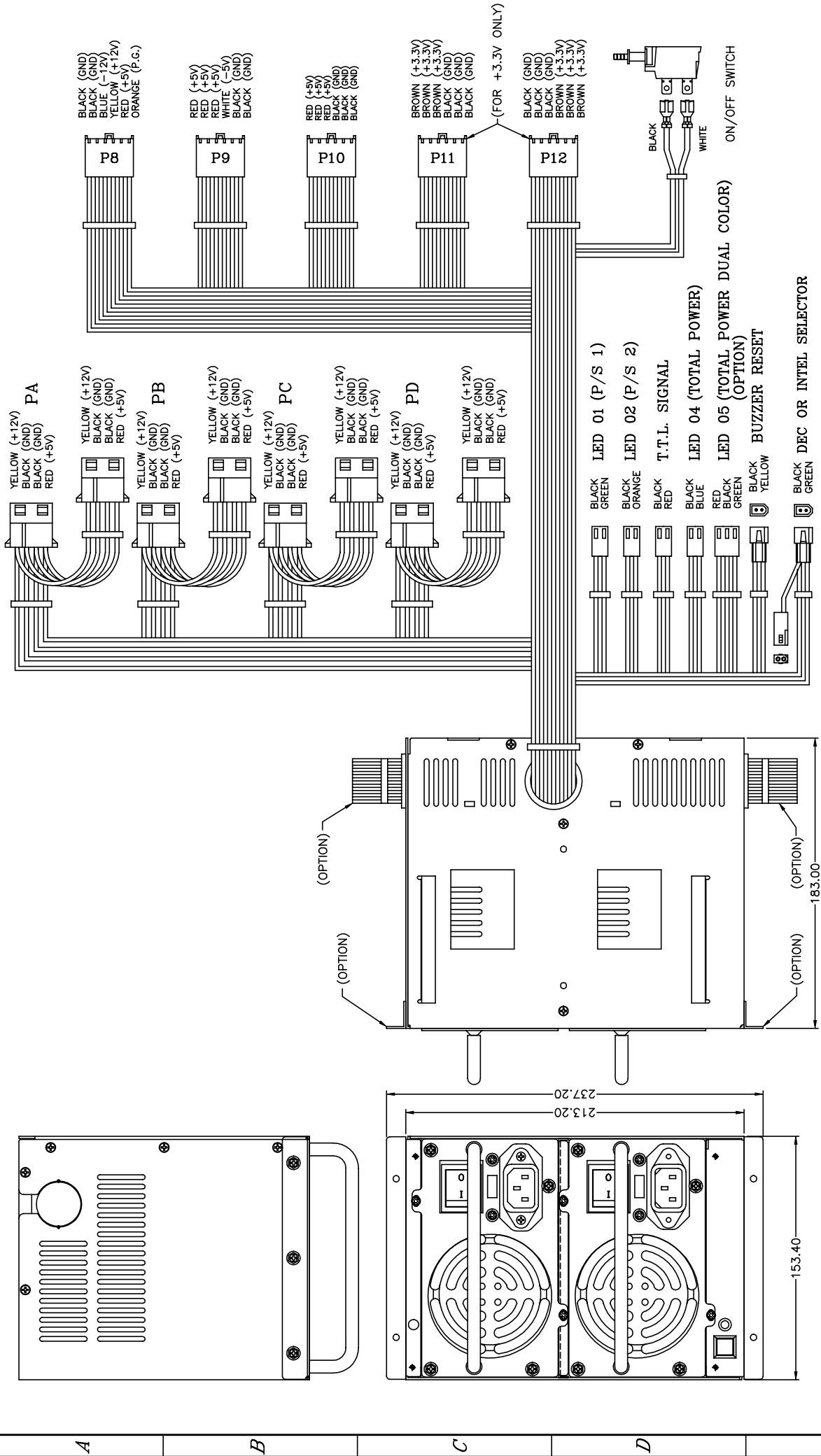
- (A) 1 x RPX
- (B) 1 x Screws pack
- (C) 1 x User's manual

1.3 DRAWING

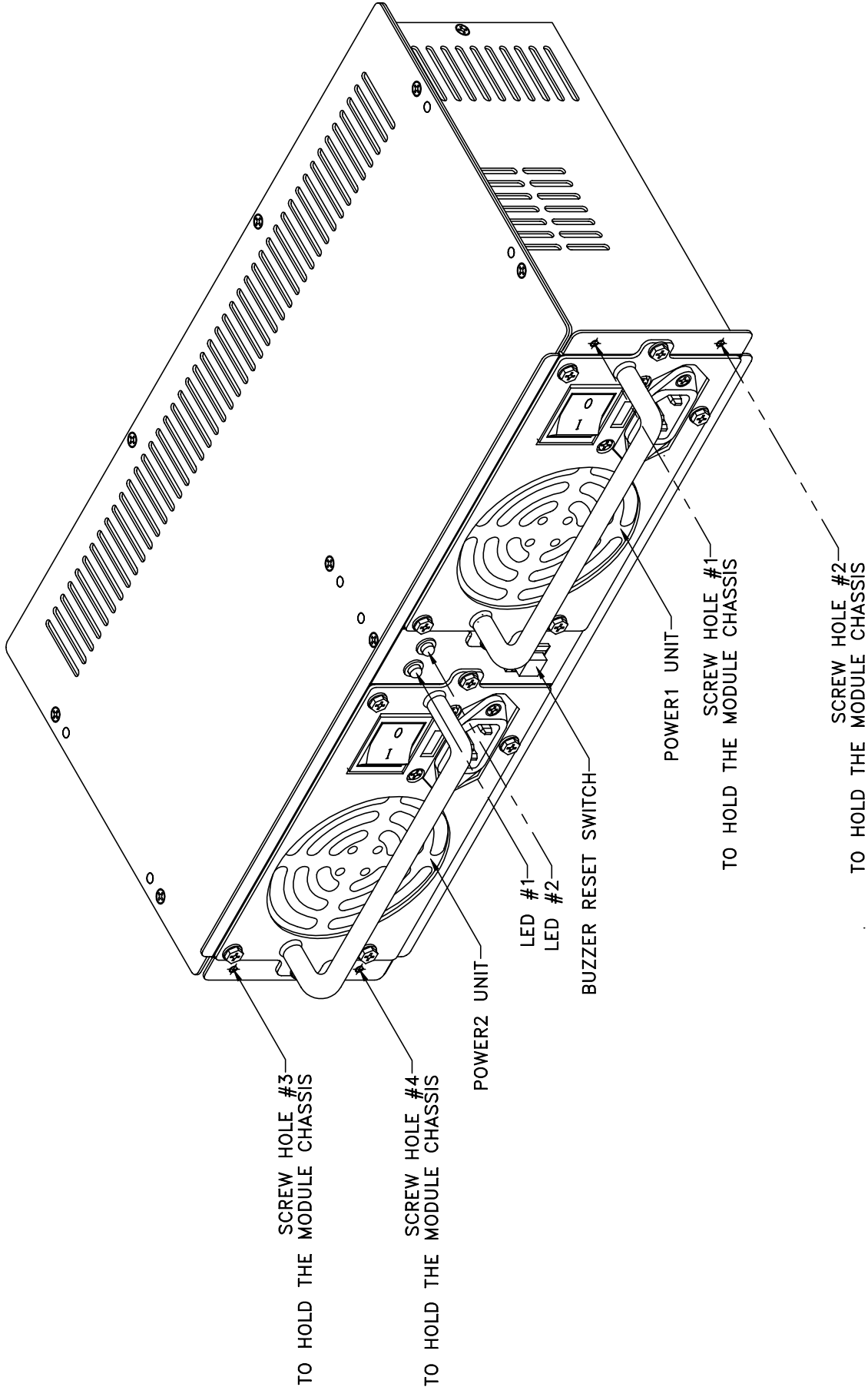
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RP X - X XXX X [X X X X]

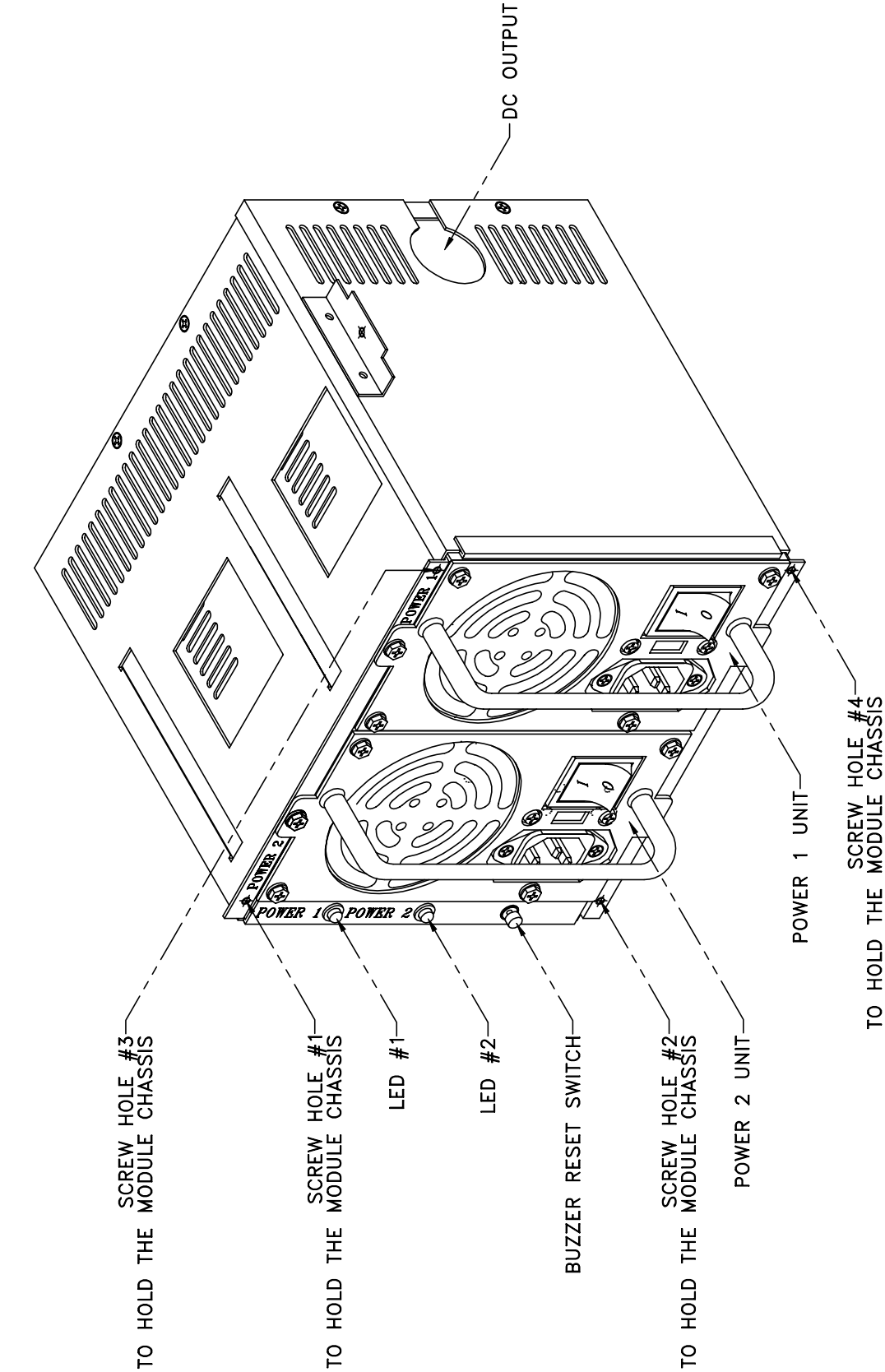
RP	----	REDUNDANT POWER SUPPLY
FIRST X	----	A / D / H / I / M / S / U ETC.
SECOND X	----	4 STAND FOR 4 DC OUTPUTS (5 / 12 / -5 / -12V) 5 STAND FOR 5 DC OUTPUTS (5 / 12 / -5 / -12V / 3.3V)
THIRD XXX	----	OUTPUT WATTS (250 / 300 / 400)
FOURTH X	----	F STAND FOR WITH EMI LINE FILTER BLANK STAND FOR WITHOUT EMI FILTER
6TH X	----	OPTIONAL FUNCTION (A : AVS ; P : PFC)
7TH X	----	R STAND FOR ATX SYSTEM BLANK STAND FOR NON-ATX SYSTEM
8TH X	----	VERSION



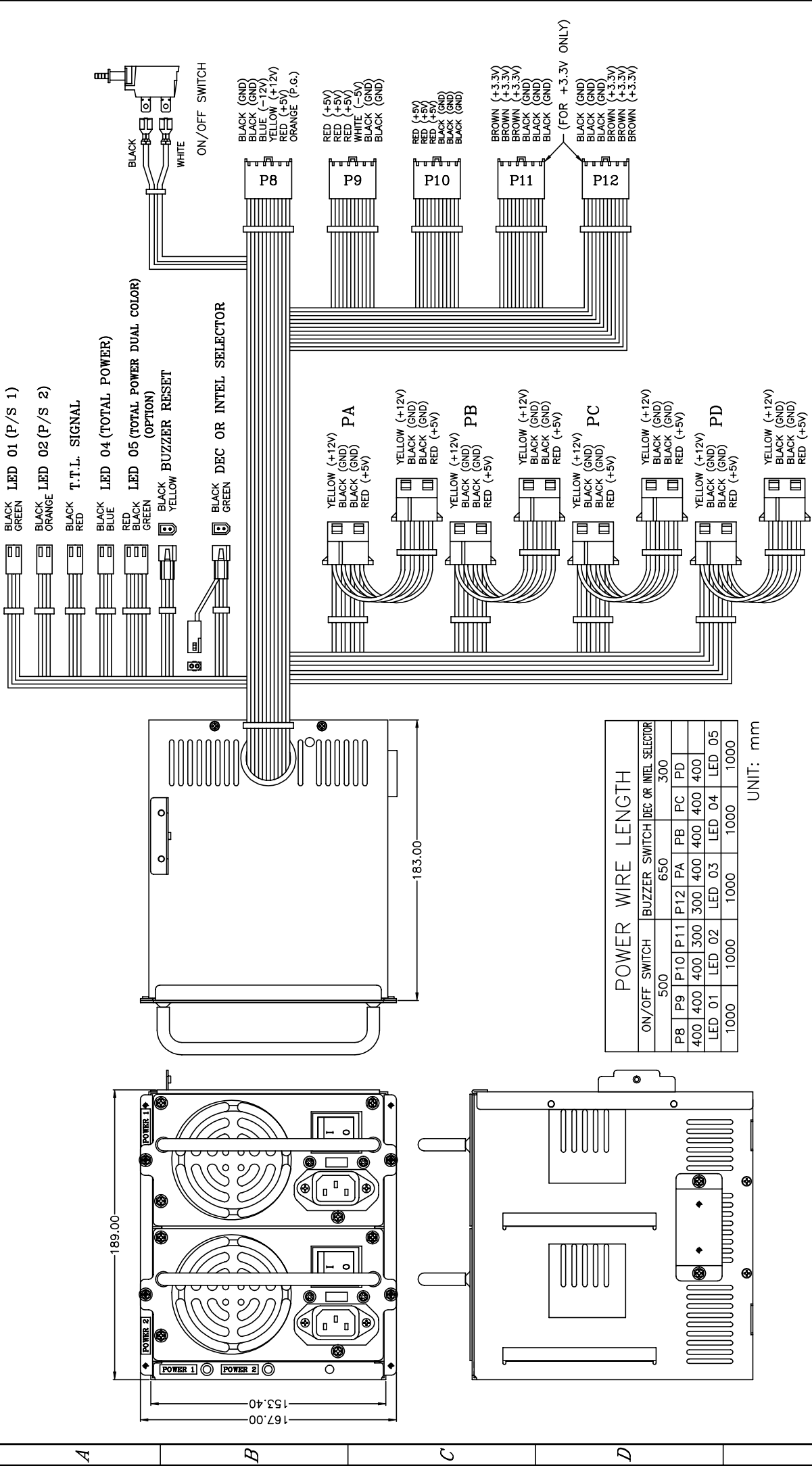
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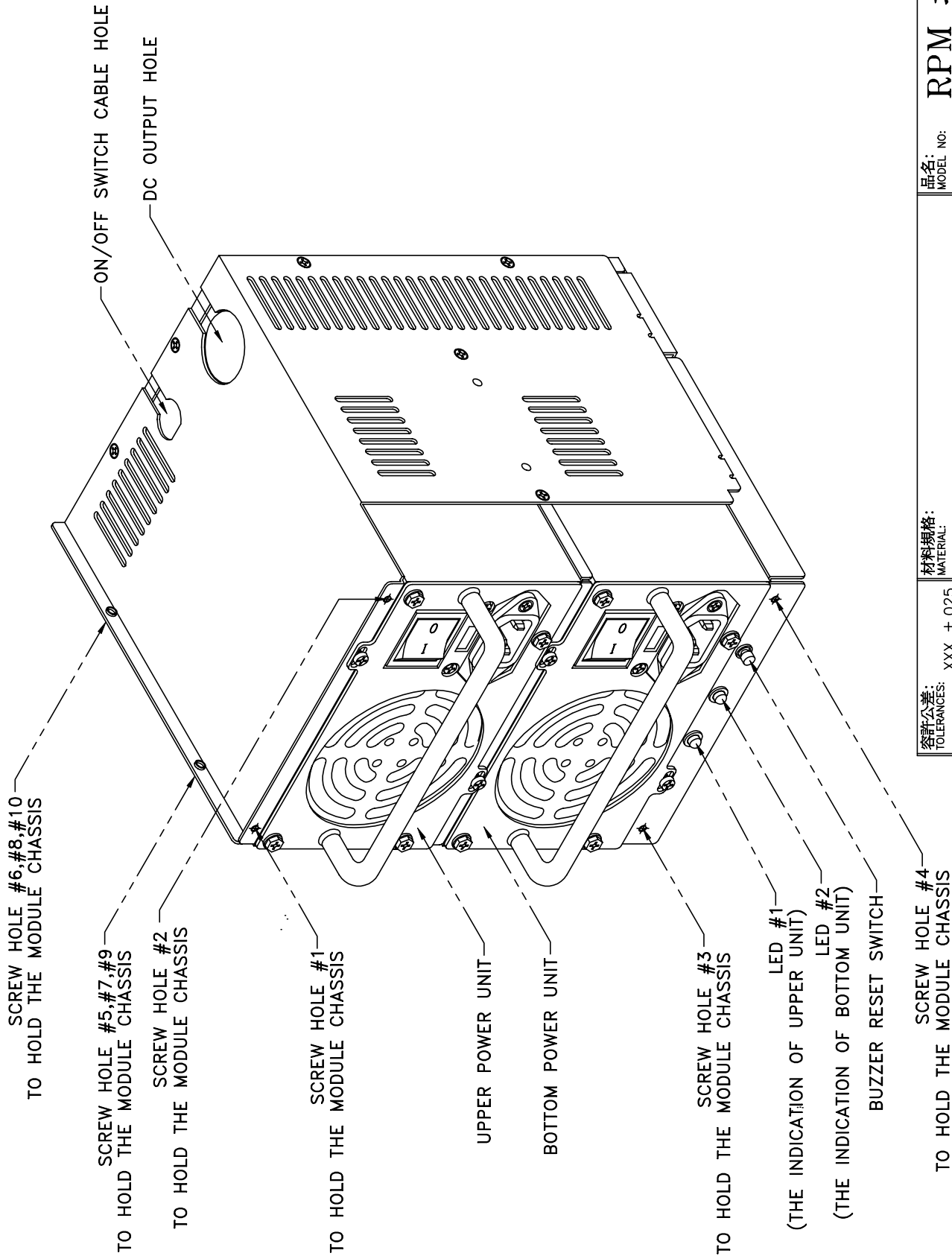
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POWER WIRE LENGTH									
ON/OFF SWITCH		BUZZER SWITCH		DEC OR INTEL SELECTOR					
500		650		300					
P8	P9	P10	P11	P12	PA	PB	PC	PD	
400	400	400	300	300	400	400	400	400	
LED 01	LED 02	LED 03	LED 04	LED 05					
1000	1000	1000	1000	1000					

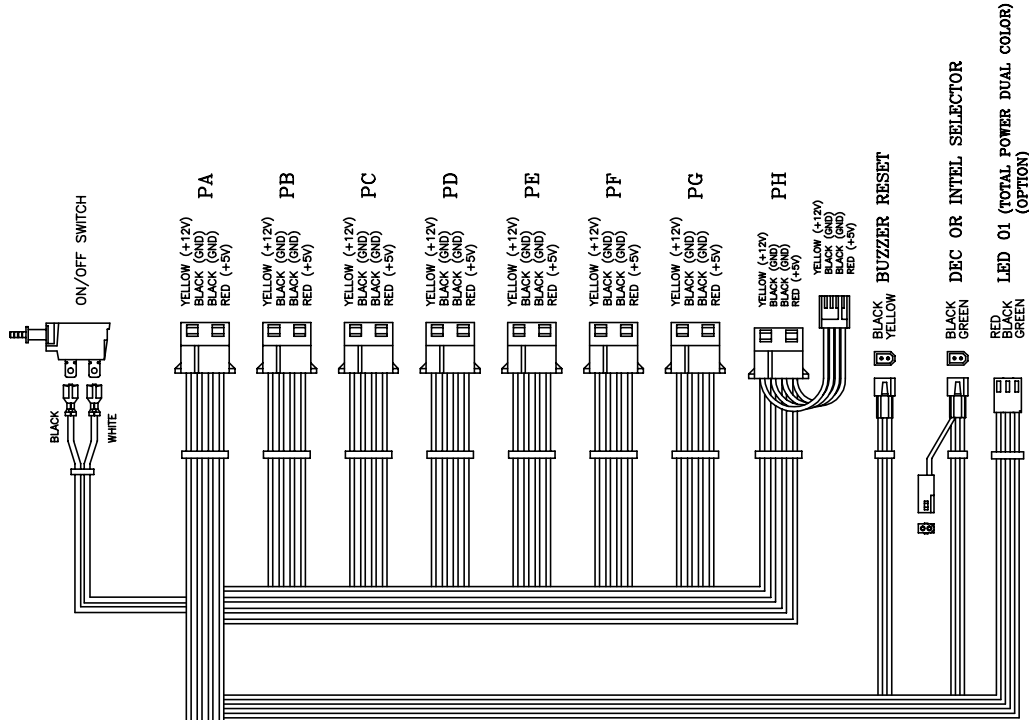
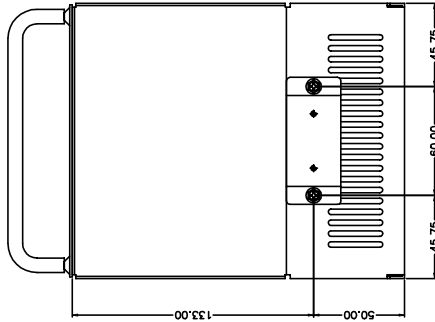
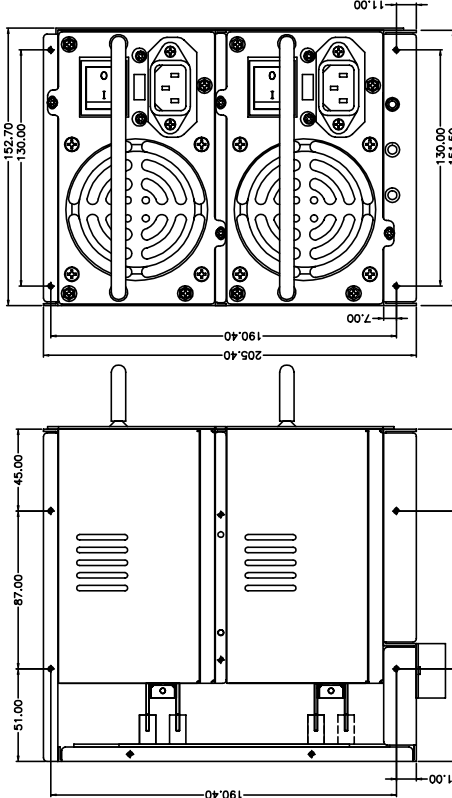
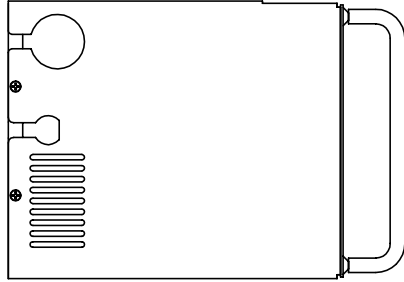
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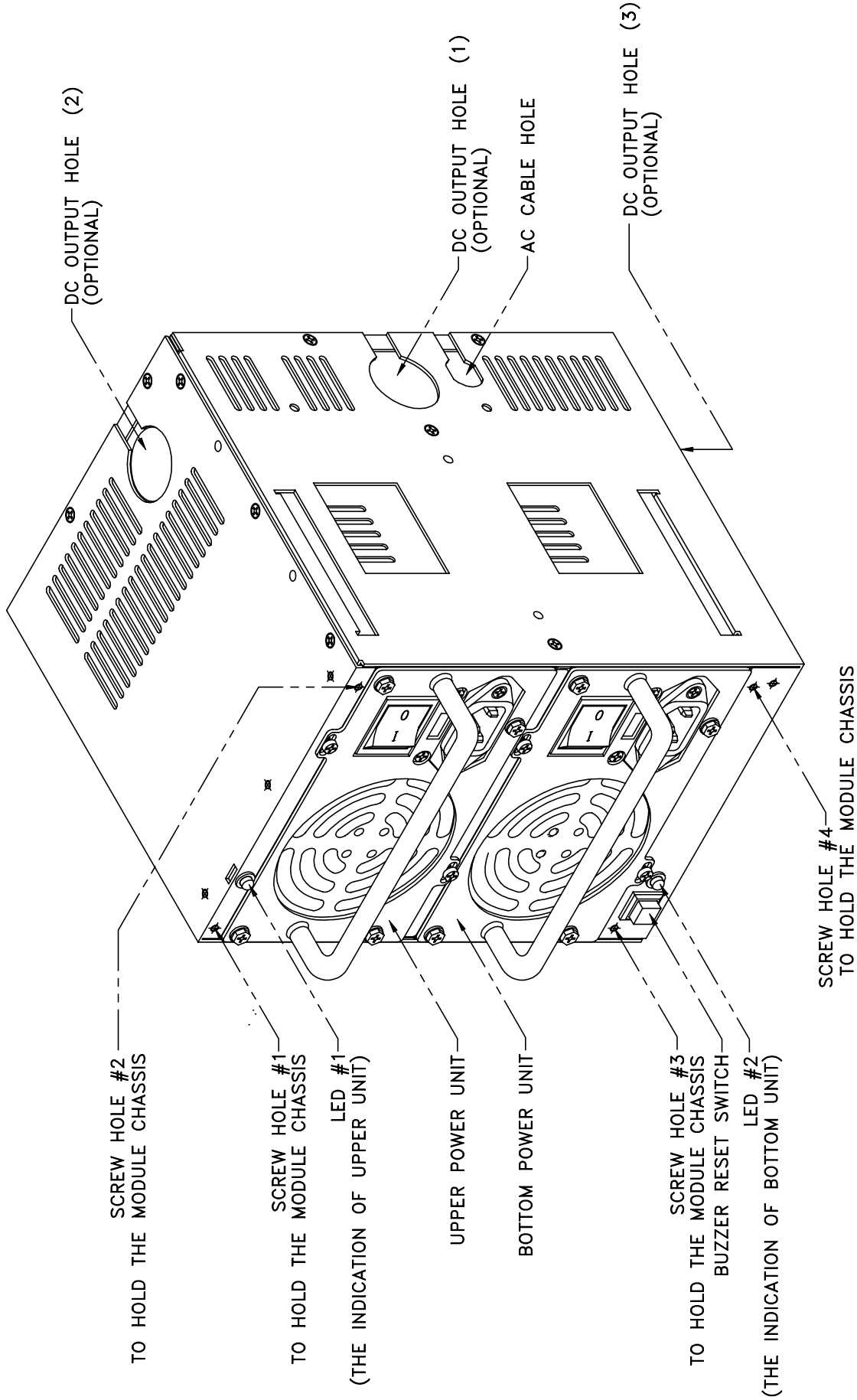


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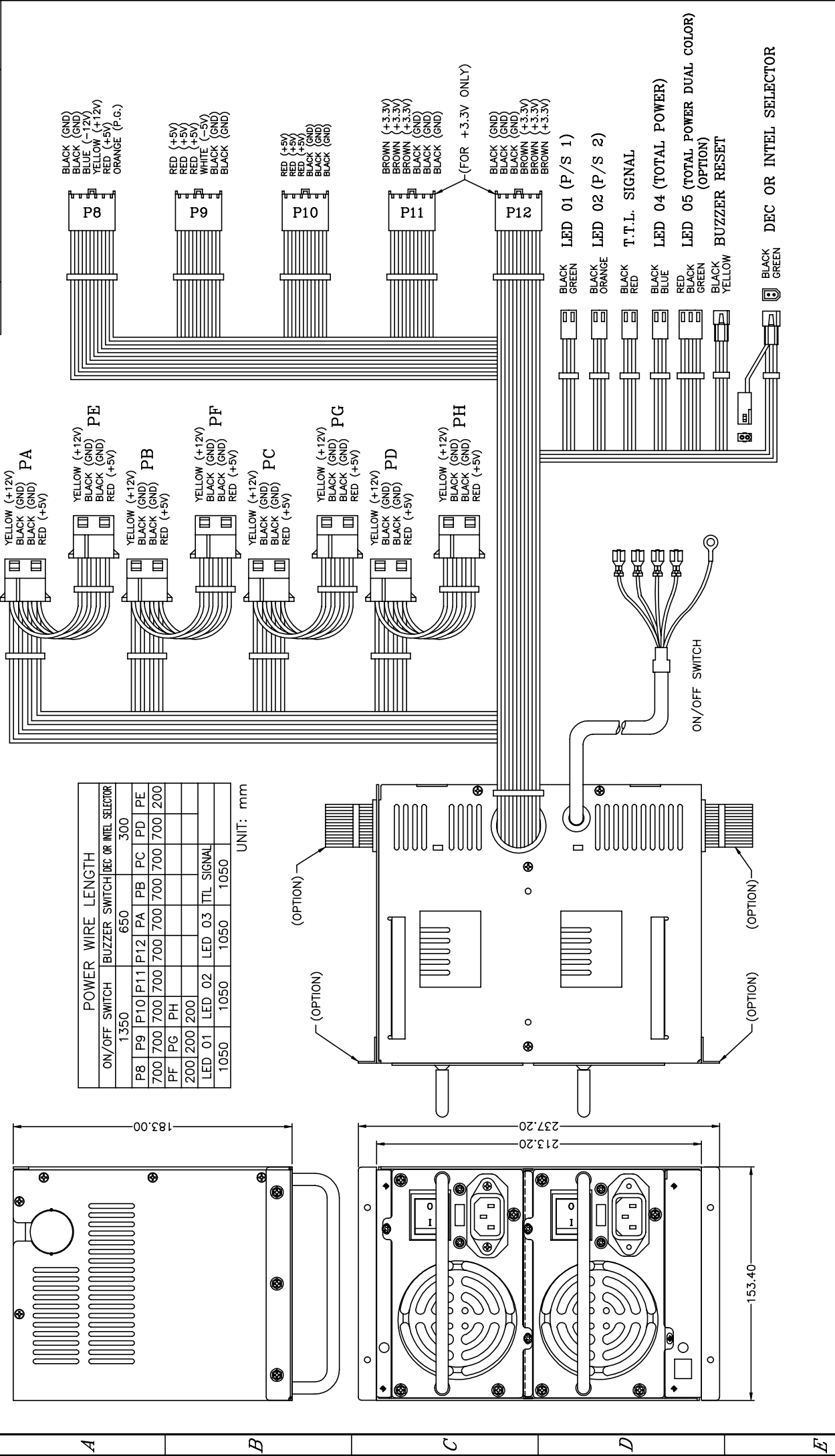
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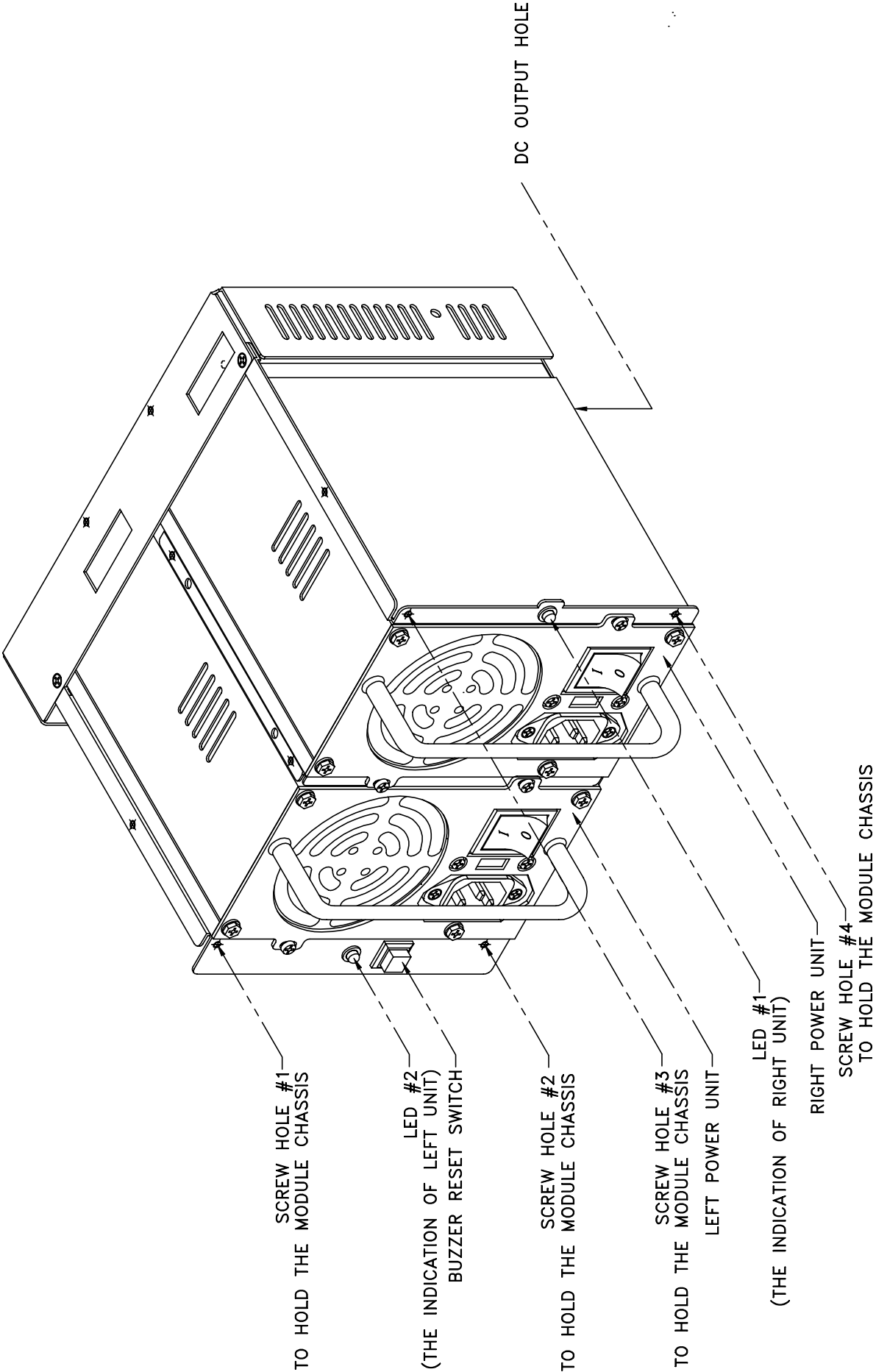
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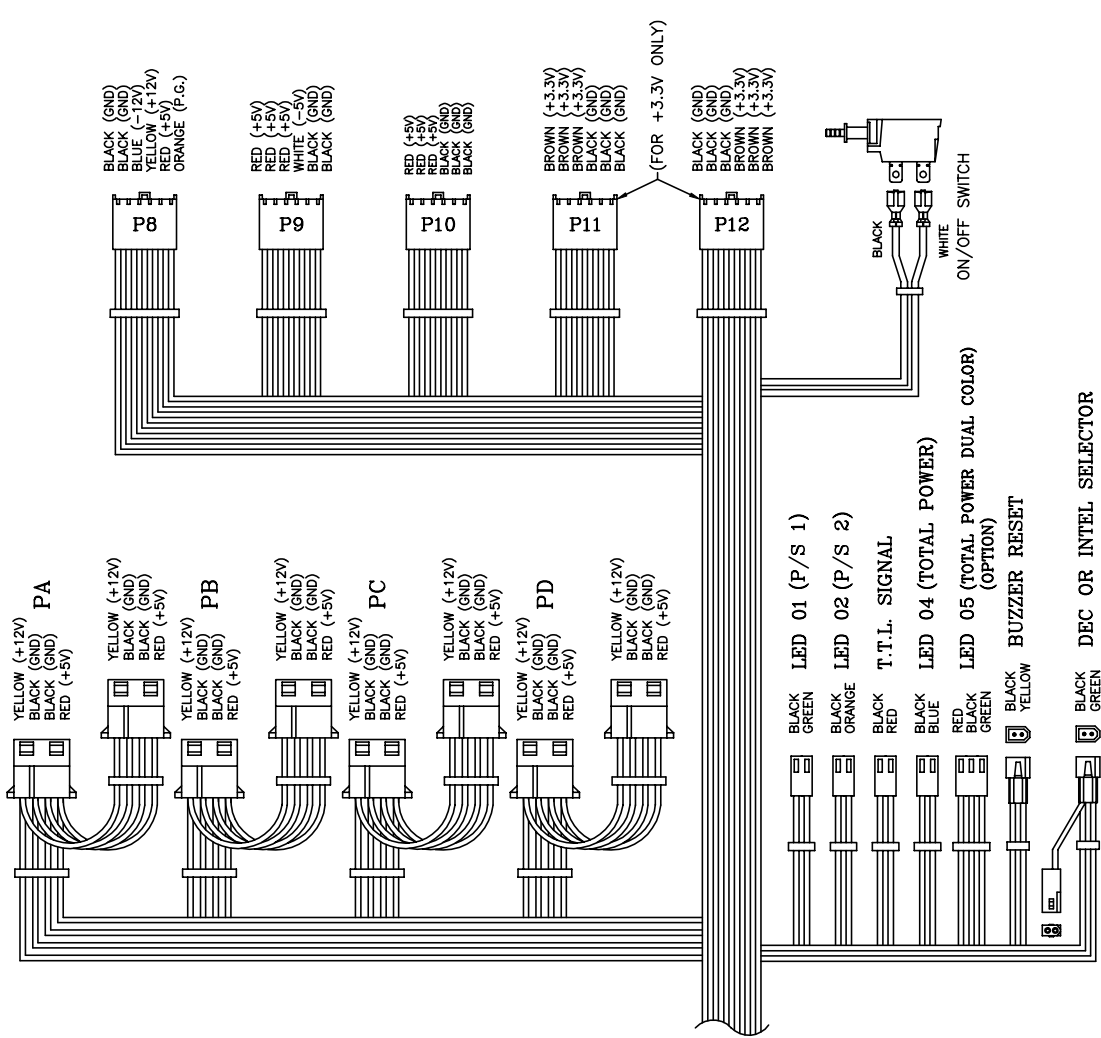
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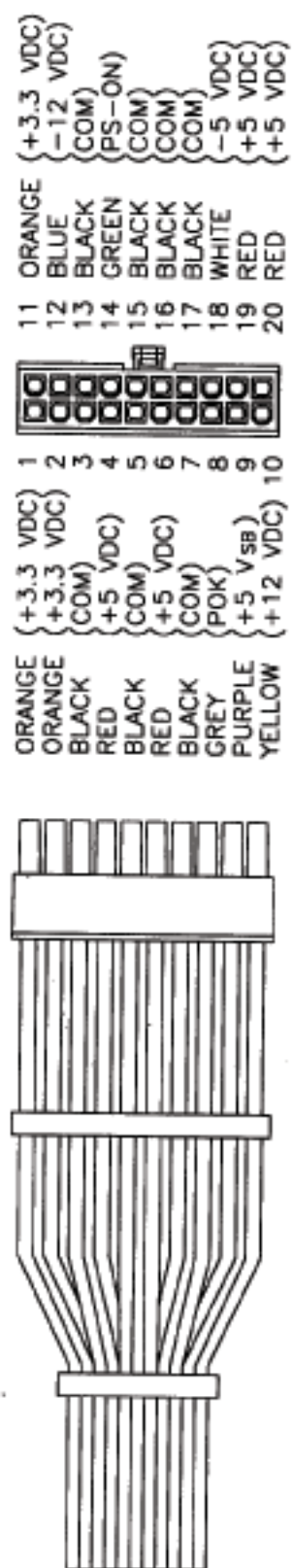
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				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
				規格: SPEC:		A1	
				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
				規格: SPEC:		A1	
				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
				規格: SPEC:		A1	
				單位: REV. NO:		mm A2	
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				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
				規格: SPEC:		A1	
				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
				規格: SPEC:		A1	
				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
				規格: SPEC:		A1	
				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
				規格: SPEC:		A1	
				單位: REV. NO:		mm A2	
				編號: FILE NO:		RPU00MA02	
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				單位: REV. NO:		mm A2	
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				編號: FILE NO:		RPU00MA02	
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				單位: REV. NO:		mm A2	
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				單位: REV. NO:		mm A2	
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				規格: SPEC:		A1	
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ATX 20 PINS CONNECTOR PINOUT

1.4 FEATURES

REDUNDANCY	Offer redundant function for power system and mutually backs up the outputs. A zero transfer time when backup takes place.
HOT-SWAP FUNCTION	The power system provides a Hot-Swap function. This means when either one of the redundant power supplies fails or breaks down, you can easily replace failed unit without any interference to the system.
BUZZER	A warning buzzer sounds when any one of the power supplies fails. The warning buzzer is resettable from either the front control panel or the switch on the rear side.
POWER DEFECTIVE SIGNAL	The unit provides a power defective signal thru the power monitor card (PMC-21 / 22) to acknowledge the system.
LED'S	The warning LED's can be found either on the rear side or the control panel of the power system. Tells if one of the two power supplies has failed, by LED flashing or blinking.
HOT-PLUGGABLE FUNCTION	The power system provides a Hot-Pluggable function. This method allows the power units in the Disk Array / File Server to be removed or inserted very easily without opening and closing the chassis.
SAFETY (CHECK VENDOR)	Since the power system used in the Disk Array / File Server is all DC current (including the I / O Switch operation, and the power for the drive), it prevents a person from being shocked by high AC voltage during the installation or Hot-Swap procedure.
RELIABILITY	The power unit's ON / OFF switch is controlled by the use of a very small DC current, this prevents damage the ON / OFF switch, keep the system from a total uncontrollable situation.
COMPATIBILITY (RPD ONLY)	The enclosure of the power system is designed the same as the Big L form factor power supply, so under proper arrangement of the system chassis the Big L form factor and the redundant power system can be compatible.

1.5 SPECIFICATION

INPUT CHARACTERISTICS:

RPX - 4250 / 5250

- * VOLTAGE : 90 - 132 VAC OR 180 - 264 VAC SWITCHABLE
- * FREQUENCY : 47 - 63 HZ
- * INPUT CURRENT : 3.0 A / 1.5 A PER UNIT (PARALLEL)
6.0 A / 3.0 A (ONE POWER SUPPLY)
- * INRUSH CURRENT : 30 A MAX. FOR 115 VAC,
60 A MAX. FOR 230 VAC (ONE POWER SUPPLY)

OUTPUT CHARACTERISTICS :

OUTPUT VOLTAGE	OUTPUT CURRENT		REGULATION		OUTPUT
	MIN. (A)	MAX. (A)	LOAD	LINE	RIPPLE & NOISE MAX. (P-P)
5	7.0	25/50*	+ / - 5%	+ / - 1%	50 mV
	3.0**	10/20**			
12	2.5	14/28*	+ / - 5%	+ / - 1%	100 mV
-5V	0	0.5	+ / - 10%	+ / - 2%	150 mV
-12	0	0.5	+ / - 10%	+ / - 2%	150 mV
3.3***	3	20	+ / - 5%	+ / - 1%	50 mV

- * : PEAK FOR 1 MINUTE ** : UNDER WITH 3.3 V OUTPUT CONDITION
*** : 3.3 OUTPUT IS OPTIONAL

THE MAX. TOTAL OUTPUT OF +5V AND +3.3V IS 125W.

- * TEMPERATURE RANGE : OPERATING 0 °C --- 50 °C, STORAGE -20 °C --- 80 °C
- * TRANSIENT RESPONSE : OUTPUT VOLTAGE RETURNS IN LESS THAN 1 ms
MAX. FOLLOWING A 50 % LOAD CHANGE
- * HOLD UP TIME : 16 ms MINIMUM AT FULL LOAD & NOMINAL INPUT VOLTAGE
- * DIELECTRIC WITHSTAND : INPUT TO FRAME GROUND 1500 VAC FOR 1 SEC.
- * HUMIDITY : 10 - 90 % RH
- * EFFICIENCY : 70 % TYPICAL AT FULL LOAD
- * POWER GOOD SIGNAL : ON DELAY 100 ms TO 500 ms, POWER FAIL ≥ 1 ms
- * OVERLOAD PROTECTION : 110 - 150 % MAX. (POWER UNIT)
- * OVER VOLTAGE PROTECTION : + 5V OUTPUT: 5.5 V --- 6.5 V
- * SHORT PROTECTION
- * ALARM METHOD: 1) AUDIO ALARM 2) FAULT LED 3) POWER DEFECTIVE SIGNAL
- * EMI NOISE FILTER: AC INPUT LINE FILTER FOR FCC CLASS B ON EACH UNIT
- * SAFETY: EACH POWER UNIT ARE **UL / CSA / TÜV APPROVAL**
- * **HOT-SWAPPABLE & HOT-PLUGGABLE CAPABILITY**
- * DIMENSION : **REFER THE DRAWING**
- * REDUNDANCY: **BALANCED SHARE LOAD METHOD**

INPUT CHARACTERISTICS:**RPX - 4300 / 5300**

- * VOLTAGE : 90 - 132 VAC OR 180 - 264 VAC SWITCHABLE
- * FREQUENCY : 47 - 63 HZ
- * INPUT CURRENT : 3.4 A / 1.7 A PER UNIT (PARALLEL)
6.2 A / 3.1 A (ONE POWER SUPPLY)
- * INRUSH CURRENT : 40 A MAX. FOR 115 VAC,
80 A MAX. FOR 230 VAC (ONE POWER SUPPLY)

OUTPUT CHARACTERISTICS :

OUTPUT VOLTAGE	OUTPUT CURRENT		REGULATION		OUTPUT RIPPLE & NOISE MAX. (P-P)
	MIN. (A)	MAX. (A)	LOAD	LINE	
5	7.0	25/50*	+ / - 5%	+ / - 1%	50 mV
	3.0**	10/20**			
12	2.5	14/28*	+ / - 5%	+ / - 1%	100 mV
-5V	0	0.5	+ / - 10%	+ / - 2%	150 mV
-12	0	0.5	+ / - 10%	+ / - 2%	150 mV
3.3***	3	20	+ / - 5%	+ / - 1%	50 mV

- * : PEAK FOR 1 MINUTE ** : UNDER WITH 3.3 V OUTPUT CONDITION
*** : 3.3 OUTPUT IS OPTIONAL

THE MAX. TOTAL OUTPUT OF +5V AND +3.3V IS 125W.

- * TEMPERATURE RANGE : OPERATING 0 °C --- 50 °C, STORAGE -20 °C --- 80 °C
- * TRANSIENT RESPONSE : OUTPUT VOLTAGE RETURNS IN LESS THAN 1 ms
MAX. FOLLOWING A 50 % LOAD CHANGE
- * HOLD UP TIME : 16 ms MINIMUM AT FULL LOAD & NOMINAL INPUT VOLTAGE
- * DIELECTRIC WITHSTAND : INPUT TO FRAME GROUND 1500 VAC FOR 1 SEC.
- * HUMIDITY : 10 - 90 % RH
- * EFFICIENCY : 70 % TYPICAL AT FULL LOAD
- * POWER GOOD SIGNAL : ON DELAY 100 ms TO 500 ms, POWER FAIL ≥ 1 ms
- * OVERLOAD PROTECTION : 110 - 150 % MAX. (POWER UNIT)
- * OVER VOLTAGE PROTECTION : + **5V OUTPUT: 5.5 V --- 6.5 V**
- * SHORT PROTECTION
- * ALARM METHOD: 1) AUDIO ALARM 2) FAULT LED 3) POWER DEFECTIVE SIGNAL
- * EMI NOISE FILTER: AC INPUT LINE FILTER FOR FCC CLASS B ON EACH UNIT
- * SAFETY: EACH POWER UNIT ARE **UL / CSA / TÜV APPROVAL**
- * **HOT-SWAPPABLE & HOT-PLUGGABLE CAPABILITY**
- * DIMENSION : **REFER THE DRAWING**
- * REDUNDANCY: **BALANCED SHARE LOAD METHOD**

INPUT CHARACTERISTICS:**RPX - 4400 / 5400**

- * VOLTAGE : 95 - 132 VAC OR 190 - 264 VAC SWITCHABLE
- * FREQUENCY : 47 - 63 HZ
- * INPUT CURRENT : 4.0 A / 2.0 A PER UNIT (PARALLEL)
8.0 A / 4.0 A (ONE POWER SUPPLY)
- * INRUSH CURRENT : 40 A MAX. FOR 115 VAC,
80 A MAX. FOR 230 VAC (ONE POWER SUPPLY)

OUTPUT CHARACTERISTICS :

OUTPUT VOLTAGE	OUTPUT CURRENT		REGULATION		OUTPUT RIPPLE & NOISE MAX. (P-P)
	MIN. (A)	MAX. (A)	LOAD	LINE	
5	7.0	36/72*	+ / - 3%	+ / - 1%	50 mV
	3.0**	20/40**			
12	2.5	24/48*	+ / - 3%	+ / - 1%	100 mV
-5V	0	1	+ / - 10%	+ / - 1%	150 mV
-12	0	1	+ / - 10%	+ / - 1%	150 mV
3.3***	3	20	+ / - 3%	+ / - 1%	50 mV

* : PEAK FOR 1 MINUTE ** : UNDER WITH 3.3 V OUTPUT CONDITION

*** : 3.3 OUTPUT IS OPTIONAL

ACTUAL POWER USAGE SHALL NOT OVER THE TOTAL OUTPUT POWER

THE MAX. TOTAL OUTPUT OF +5V AND +3.3V IS 160W.

- * TEMPERATURE RANGE : OPERATING 0 °C --- 50 °C, STORAGE -20 °C --- 80 °C
- * TRANSIENT RESPONSE : OUTPUT VOLTAGE RETURNS IN LESS THAN 1 ms
MAX. FOLLOWING A 50 % LOAD CHANGE
- * HOLD UP TIME : 16 ms MINIMUM AT FULL LOAD & NOMINAL INPUT VOLTAGE
- * DIELECTRIC WITHSTAND : INPUT TO FRAME GROUND 1500 VAC FOR 1 SEC.
- * HUMIDITY : 10 - 90 % RH
- * EFFICIENCY : 70 % TYPICAL AT FULL LOAD
- * POWER GOOD SIGNAL : ON DELAY 100 ms TO 500 ms, POWER FAIL ≥ 1 ms
- * OVERLOAD PROTECTION : 110 - 150 % MAX. (POWER UNIT)
- * OVER VOLTAGE PROTECTION : + 5V OUTPUT: 5.5 V --- 6.5 V
+ 12V OUTPUT: 13.5 V --- 15.5 V (OPTIONAL)
- * SHORT PROTECTION
- * ALARM METHOD: 1) AUDIO ALARM 2) FAULT LED 3) POWER DEFECTIVE SIGNAL
- * EMI NOISE FILTER: AC INPUT LINE FILTER FOR FCC CLASS B ON EACH UNIT
- * SAFETY: EACH POWER UNIT ARE **UL / CSA / TÜV APPROVAL**
- * **HOT-SWAPPABLE & HOT-PLUGGABLE CAPABILITY**
- * DIMENSION : **REFER THE DRAWING**
- * REDUNDANCY: **BALANCED SHARE LOAD METHOD**

INPUT CHARACTERISTICS:**RPX-5300F / 5400F-RV**

- VOLTAGE: 90 - 132 VAC / 180 - 260 VAC SWITCHABLE
- FREQUENCY: 47 - 63 Hz
- INPUT CURRENT: 3.0A / 1.5A PER UNIT (PARALLEL), 6.0A / 3.0A (ONE POWER)
- INRUSH CURRENT: 40A MAX. FOR 110 VAC, 80A MAX. FOR 220VAC

OUTPUT CHARACTERISTICS:

OUTPUT VOLTAGE	OUTPUT CURRENT		REGULATION		OUTPUT
	MIN. [A]	MAX. [A]	LOAD	LINE	RIPPLE & NOISE MAX. [P-P]
+5V	7.0	30/50*	± 5%	± 1%	50mV
-5V	0	0.5/1.0*	-10%~+14%	± 1%	150mV
+12V	2.5	11	± 6%	± 1%	100mV
-12V	0	0.5/1.0*	-10%~+15%	± 1%	150mV
+3.3V	1.0	25/18*	± 5%	± 1%	50mV
+5VSB	0	800mA	± 5%	± 1%	50mV

*

N / N: 300 / 400W

300W VERSION: +5V AND +3.3V TOTAL OUTPUT MAX: 150W

400W VERSION: +5V AND +3.3V TOTAL OUTPUT MAX: 250W

SPECIFICATION:

- TEMPERATURE RANGE: OPERATING 0°C -- 50°C; STORAGE -20°C -- 80°C
 - TRANSIENT RESPONSE: OUTPUT VOLTAGE RETURNS IN LESS THAN 1 ms MAX. FOLLOWING A 50% LOAD CHANGE
 - HOLD UP TIME: 16 ms MINIMUM AT FULL LOAD & NORMAL INPUT VOLTAGE
 - DIELECTRIC WITHSTAND: INPUT / OUTPUT 1500 VAC FOR 1 SECOND
INPUT TO FRAME GROUND 1500 VAC FOR 1 SECOND
 - HUMIDITY: 10 ~ 90% RH
 - EFFICIENCY: 60% TYPICAL, AT FULL LOAD
 - POWER GOOD SIGNAL: ON DELAY 100 ms TO 500 ms, OFF DELAY 1 ms
 - OVER LOAD PROTECTION: 130 ~ 150% MAX.
 - OVER VOLTAGE PROTECTION: **+5V → 5.5V ~ 7.0V, 3.3V: 3.8V ~ 4.5V**
 - OVER CURRENT PROTECTION: SHORT CIRCUIT
 - ALARM METHOD: 1. AUDIO ALARM, 2. FAULT LED, 3. POWER DEFECTIVE SIGNAL
 - EMI NOISE FILTER: AC INPUT LINE FILTER FOR FCC CLASS B ON EACH POWRE UNIT ARE AVAILABLE UPON ORDER
 - SAFETY: UL / CSA / TÜV APPROVAL
 - **HOT-SWAPPABLE / HOT-PLUGGABLE CAPABILITY**
 - **DIMENSION: REFER TO THE DRAWING**
 - REDUNDANCY: **BALANCE SHARE LOAD METHOD**
 - REMOTE ON/OFF: OPERATE BY A REMOTE (SELV) SIGNAL
- 5VSB STANDBY VOLTAGE: A LOW CURRENT CONTINUOUS 100mA SOURCE AT +5V, ALWAYS ENABLE, CAN NOT BE SWITCHED OFF

1.6 INSTALLATION & TESTING

Turn off the main on/off switch and the individual power supply's on/off switches (on the rear side).

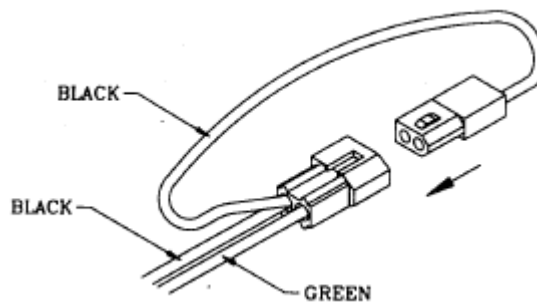
Mount the power supply in the case using the mounting hardware that is included, the mounting holes in the power supply should match up with those in the case.

Attach the six-pin connectors (20-pin connector for ATX system) to the motherboard by following the motherboard instructions, there are different kinds of pinouts in both the power supply and motherboard, they should match each other, **otherwise the connection will cause undetectable harmness.**

Attach all the remaining power supply connections to the various peripherals as needed, these connectors are "keyed", so there will be only one possible way to connect them.

NOTE: The power unit is designed for **AT** system or **ATX** system. Before using the power unit, please aware the following instruction; otherwise, the power supply may not work properly.

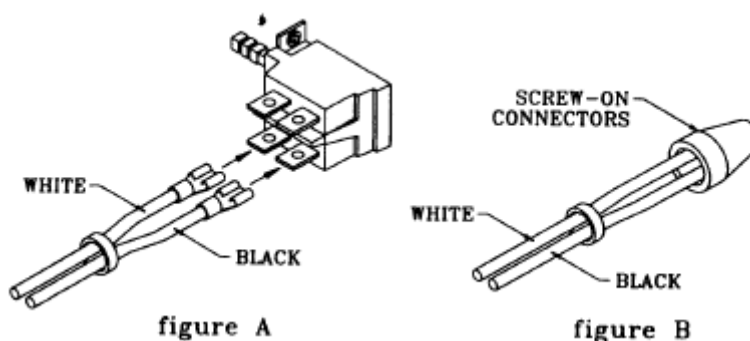
There is a wire lead accompany with the DC wires.



1. If the power unit is for AT system, please connect the connector.
2. If the power unit is for ATX system, then please do **not** connect the connector. Just leave it alone.

Soft Power Function:

If you are going to use soft power function, the power has to be always wired ON. You may either keep the power switch turned on, refer to figure A (Note: The power supply's main on / off control is designed by using DC current. Please ensure to connect the two wires to the same vertical side), or just to figure B. Then the power supply can be turned on by the screw-on connector, refer to figure B. Then the power supply can be turned on by the soft power function of the motherboard only



IMPORTANT: If you try to convert the power supply from for **ATX** system use to for normal **AT** system use, please refer the following steps:

1. Source the wires converter (20 pins connector → 6 pins connectors P8, P9, P11, P12).

P8, P9 for normal AT motherboard

P11, P12 for 3.3V DC output

Convert the 20 pins connector to 6 pins connector.

2. The selector for DEC ALPHA system & INTEL system should be selected as DEC ALPHA system. (Please refer the instruction sheet.)
3. If you **short** the white and black wires (for DC on / off switch operation use) for ATX system by using the screw-on connector, then please recover back to original design. The on / off switch operation is controlled by the on / off switch.

Before applying power to the system, make sure there are no loose or incorrect connections. The input voltage has been set to the **correct voltage** (110 / 220 V, the voltage selector are on the rear side), double check that all connection to the motherboard are properly matched.

Maybe you would like to test the redundancy function before you put back the cover of your system chassis. Turn on the main on/off switch (if your power supply's main on/off wire lead is black and white color, which means the power supply on / off control is design by using the DC current, please refer to Sec. 1.8 for installing guide), and the individual power supply's on/off switches (on the rear side), you will notice that if the power unit is operating properly, then individual LEDs , external warning LEDs (Please refer to Sec. 1.9 for detail explanation) are lit GREEN, now turn off one of the power supplies' on/off switch, the Warning Buzzer in the power system will sound, and the external warning LED which displays the status of the total power supply system will change color to be RED (**Please note, not every model has this design, some of those models LED has flashing design**), the individual LEDs (both on the rear side or on the front control panel) indicating the power supply's status will not light. Meanwhile the power system will continue to backup the power output without affecting the computer system's operation.

The Warning Buzzer will continue sounding, the user can reset the Warning Buzzer by pressing the buzzer reset switch at the rear side, refer to the drawing on Sec. 1.3, or use the reset switch which can be found on the front control panel of the system chassis, the reset switch can be connected by wires lead provided from the power supply system (Please refer to Sec. 1.9).

Turn on the power supply which is turned off for testing earlier, the sound of the Warning Buzzer will disappear, the external warning LED will turn GREEN again (or **not flashing**), the LED indicating the status of the power supply will light again, test another power supply by performing the similar procedure.

If you use the power defective signal, there is a two pins connector (refer to the drawing on Sec. 1.3 and table on Sec. 1.9), it should be connected to the PMC card properly, please refer the PMC User's Manual.

If everything works out fine, then turn off the power supplies and the main on / off switch, now put back the cover of the case and tighten them with the screws which you have retained earlier. Now you have completed the installation of the RPX redundant power supply system.

1.7 HOT-SWAP PROCEDURES

Please refer to the followings when either one power supply unit is found defective.

- A) **Locate** the defective power supply by examining the individual LED or the LED on the front control panel . (If LED is without light, it indicates the power unit is defective.)

WARNING:

PLEASE PERFORM THE ABOVE STEP CAREFULLY OTHERWISE IT MAY CAUSE SHUT DOWN OF THE WHOLE SYSTEM.

- B) **Turn off** the individual on / off switch on the rear side.
- C) **Unplug** the power cord which belongs to the defective power supply unit from the AC inlet.
- D) **Unscrew** the screws which fix the defective power supply unit.
- E) Remove the defective power supply unit by pulling out method.
- F) Replace a new **GOOD** power supply unit, **set the proper AC input voltage**, insert the power supply into the power supply system chassis.
- G) **Plug the power cord which is unplugged earlier.**
- H) **Turn on the new power supply unit.**
- I) **Check the LEDs which indicate the total power system status, that SHOULD be from FLASHING to light GREEN or from RED to GREEN. IF IT SHOWS ANOTHER TYPE, PLEASE CHECK WITH YOUR VENDOR.**
- J) Fix the new power supply unit by screwing the screws.
- K) If you want to test the NEW one power supply unit in simulating defective situation, please refer to the Section 1.6 INSTALLATION & TESTING Section.

1.8 DC ON / OFF SWITCH INSTALLATION

If you notice that there are thin black and white DC wires which connects the RPX system and the ON / OFF switch, generally, the ON / OFF switch consists of four pins on it, and splits into two half (left / right), connect the two thin wires from the power supply system to the same side either left or right side, DO NOT cross connect, since there is no particular pin assignments to the ON / OFF switch the two thin DC wires can be connected either ways on the same side of the ON / OFF switch. If there are two pairs of thin black and white DC wires, please use one pair (one black wire, one white wire) DC wires connected to one side, another pair DC wires to the other side.

The specification of the DC ON / OFF controller is :

WORKING VOLTAGE : 110 VAC ==> 5 VDC **20mA**
220 VAC ==> 5 VDC **20mA**

1.9 PINOUTS AND FUNCTION OF THE CONNECTORS

*** PLEASE AWARE THE POLARITY

THE LED CONNECTOR OF POWER #1

PIN#	COLOR	VOLTAGE
1	GREEN	+5V
2	BLACK	GND

THE LED CONNECTOR OF POWER #2

PIN#	COLOR	VOLTAGE
1	ORANGE	+5V
2	BLACK	GND

THE LED CONNECTOR OF TOTAL POWER SYSTEM

PIN#	COLOR	VOLTAGE
1	BLUE	+5V
2	BLACK	GND

THE BUZZER RESET SWITCH CONNECTOR

PIN#	COLOR	VOLTAGE
1	YELLOW	+12V
2	BLACK	GND

THE SIGNAL CONNECTOR OF POWER DEFECT

PIN#	COLOR	VOLTAGE
1	RED	TTL SIGNAL
2	BLACK	GND

1.10 TROUBLE SHOOTING

If you have followed these directions correctly, there should be no problem. Some common symptoms are : the computer is dead, a "ticking" or "hissing" sound will be heard.

1. Check all the connections.
2. Make sure the system unit is plugged in.
3. Check for short-circuits or defective peripherals by unhooking each peripheral, once at a time. When the systems functions again, you have solved the problem.
4. Once you hear the buzzer sound or see the LED with RED light (or the LED is flashing), please be aware of:
 - a. IF the individual ON / OFF is **ON** state?
 - b. IF the load is over the **minimum** load (please refer the SEC. 1.5 specification)?
 - c. IF AC input voltage been set correct?
 - d. IF each power cord been well plugged into the inlet?

Suppose the above condition been happened, please wait for 10 - 20 seconds for releasing the **protection state**, then test it again.

IF buzzer still sound or the LED shows power unit defective, please locating which power supply unit is defective by examining which LED is OFF, perform hot-swap procedure at your proper time, by turning off the on / off switch, unplug the power cord of the defective one, replace it with a new power supply unit, (please set the on / off switch of the new power supply unit to OFF first, after the unit being fixing properly, plug the power cord, turn on the on / off switch, for the detail description, please refer to the HOT-SWAP PROCEDURES), send the defective power supply unit to your vendor for RMA operation.

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The “RELIABILITY “ solution to E-application

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